In the Claims:

1-4 (cancelled)

5. (Currently Amended) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration; and

a responsive device coupled to the at least one electrode, the responsive device being configured to respond to information sensed by the sensor by controlling electrical stimulation delivered to the tissue through the at least one electrode

wherein the sensor is configured to sense and the responsive device is configured to ~~determine~~ respond to information corresponding to a patient's inspiration rate.

6. (Currently Amended) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration; and

a responsive device coupled to the at least one electrode, the responsive device being configured to respond to information sensed by the sensor by controlling electrical stimulation delivered to the tissue through the at least one electrode;

wherein the sensor is configured to sense and the responsive device is configured to ~~determine~~ respond to information corresponding to a patient's exhalation rate.

7-52. (Cancelled).

53. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein said electrical stimulation comprises a burst of pulses and wherein the programming device is configured to adjust frequency of the pulses.

54. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein said electrical stimulation comprises a burst of pulses and wherein the programming device is configured to adjust pulse width of the pulses.

55. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein said electrical stimulation comprises a burst of pulses and wherein the programming device is configured to adjust duration of the pulses.

56. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein the programming device is configured to adjust stimulation to control tidal volume of a respiratory cycle.

57. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein the programming device is configured to adjust stimulation to control inspiration rate.

58. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body wherein the at least one electrode is configured to deliver electrical stimulation to the tissue to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration, wherein said sensor is configured to sense respiratory response; and

a programming device configured to adjust stimulation parameters to elicit a desired respiratory response;

wherein the programming device is configured to adjust stimulation to control exhalation rate.

59-70 (cancelled)

71. (original) A method of controlling the respiration of a patient comprising the steps of:

sensing information corresponding to a characteristic of a patient's respiration;

comparing the characteristic to a desired characteristic; and

electrically stimulating tissue of a patient to alter the patient's respiration to cause the characteristic to approach the desired characteristic.

72. (original) The method of claim 71 wherein the characteristic comprises respiration rate.

73. (original) The method of claim 71 wherein the characteristic comprises inspiration rate.

74. (original) The method of claim 71 wherein the characteristic comprises exhalation rate.

75-93 (cancelled)

94. (Previously Presented) A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response;

wherein the stimulation comprises a burst of pulses and further comprising the step of adjust frequency of the pulses to elicit the desired response.

95. (Previously Presented) A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response;

wherein the stimulation comprises a burst of pulses and further comprising the step of adjust pulse width of the pulses to elicit the desired response.

96. (Previously Presented) A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response;

wherein the stimulation comprises a burst of pulses and further comprising the step of adjusting duration of the pulses to elicit the desired result.

97. (Previously Presented) A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response; and

adjusting stimulation to control tidal volume of a respiratory cycle.

98. (Previously Presented)

A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response; and

adjusting stimulation to control inspiration rate.

99 (Previously Presented). A method for managing respiration of a patient comprising the steps of:

providing at least one electrode and coupling the at least one electrode to tissue of a patient's body whereby electrical stimulation to the tissue elicits a diaphragm respiratory response;

provide stimulation to the tissue;

sensing respiratory response to adjust parameters of the stimulation to elicit a desired respiratory response; and

adjusting stimulation to control exhalation rate.

100. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body; and

a stimulation pulse generator configured to deliver electrical stimulation to the tissue through the at least one electrode to thereby elicit a diaphragm respiratory response comprising a respiration waveform having an inspiration portion and an exhalation portion;

wherein the stimulation pulse generator is configured to control at least one of said inspiration portion and expiration portion of the respiration waveform.

101. (Previously Presented) The device of claim 100 wherein the pulse generator is configured to control the rate of inspiration.

102. (Previously Presented) The device of claim 100 wherein the pulse generator is configured to control the rate of exhalation.

103. (Previously Presented) The device of claim 100 further comprising a sensor configured to sense information corresponding to the respiration waveform of a patient's respiration; and

a responsive device coupled to the stimulation pulse generator, the responsive device being configured to respond to information sensed by the sensor by controlling electrical stimulation delivered to the tissue through the at least one electrode to control a parameter of a respiration waveform of a subsequent respiration cycle.

104. (Previously Presented) The device of claim 103 wherein the parameter is inspiration rate.

105. (Previously Presented) The device of claim 103 wherein the parameter is exhalation rate.

106. (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the respiration waveform to control the partial pressure of carbon dioxide of the patient's blood.

107 (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the respiration waveform to control the level of oxygen in the patient's blood.

108. (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the inspiration time.

109. (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the inspiration amplitude.

110. (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the exhalation time.

111. (Previously Presented) The device of claim 100 wherein the stimulation pulse generator is configured to manipulate the exhalation amplitude.

112. (Previously Presented) The device of claim 100 further comprising an apnea detector coupled to the sensor and configured to detect an apnea event.

113. (Previously Presented) A device for managing respiration of a patient comprising:

at least one electrode configured to be coupled to tissue of a patient's body; and

a stimulation pulse generator configured to deliver electrical stimulation to the tissue through the at least one electrode to thereby elicit a diaphragm respiratory response;

a sensor configured to sense information corresponding to the patient's respiration; and

a responsive device coupled to the at least one electrode, the responsive device being configured to respond to information sensed by the sensor by controlling electrical stimulation delivered to the tissue through the at least one electrode to adjust stimulation delivered through the at least one electrode based upon information sensed by the sensor, to elicit a respiratory response substantially similar to a predetermined respiratory waveform.

114. (Previously Presented) The device of claim 113 wherein the predetermined respiratory waveform comprises an intrinsic respiratory waveform for the patient.

115. (Previously Presented) The device of claim 5 wherein the responsive device is configured to adjust stimulation delivered to said at least one electrode to manipulate inspiration rate.

116. (Previously Presented) The device of claim 115 wherein the responsive device is configured to adjust stimulation delivered to said at least one electrode to manipulate inspiration duration.

117. (Previously Presented) The device of claim 116 wherein the responsive device is configured to induce a slower inspiration rate with respect to an intrinsic inspiration rate and a longer inspiration duration with respect to an intrinsic inspiration duration.

118. (Previously Presented) The device of claim 5 wherein the responsive device is configured to manipulate an inspiration waveform of an inspiration cycle to manipulate blood PCO_2.

119. (Previously Presented) The device of claim 5 wherein the responsive device is configured to manipulate the respiration waveform to control the level of oxygen in the patient's blood.

120. (Previously Presented) The device of claim 6 wherein the responsive device is configured to adjust stimulation delivered to said at least one electrode to manipulate exhalation rate.

121. (Previously Presented) A method of treating a patient comprising:

controlling partial pressure of carbon dioxide of blood of a patient by:

providing at least one electrode coupled to tissue of a patient's body; and

a stimulation pulse generator configured to deliver electrical stimulation to the tissue through the at least one electrode;

eliciting a diaphragm respiratory response comprising a respiration waveform having an inspiration portion and an exhalation portion;

controlling at least one of said inspiration portion and expiration portion of the respiration waveform.

122. (Previously Presented) The method of claim 121 wherein the method of treating the patient comprises treating sleep apnea.